AGC/WSDOT Structures Team Minutes
April 22, 2005
Members in Attendance

Attendees:	Company	Phone	E-mail
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Foster, Marco	WSDOT-NWR	360-757-5999	fosterm@wsdot.wa.gov
Hilmes, Bob	WSDOT-ER	509-324-6232	Hilmesb@wsdot.wa.gov
Kapur, Jugesh	WSDOT_HQ	360-705-7209	kapurju@wsdot.wa.gov
McCoy, Charlie	Atkinson Const.	425-255-7551	charlie.mccoy@atkn.com
Owings, Don	WSDOT-SWR	360-905-2093	owingsd@wsdot.wa.gov
Parrish, Kevin	Hamilton Const.	541-746-2426	kparrish@hamil.com
Quigg, John	Quigg Bros.	360-533-1530	johnq@quiggbros.com
Schmidt, Virgil	WSDOT-HQ	360-705-7825	schmidv@wsdot.wa.gov
Sheikhizadeh, M.	WSDOT-HQ	360-705-7828	sheikhm@wsdot.wa.gov
Smith, Tobin	Max J. Kuney	509-535-0651	tobin@maxkuney.com

Others in attendance:

Chris Deane	Wilder construction	425-531-3100
Lou Tran	Hq. Bridge Design	360-705-7195
Ron Lewis	Hq. Bridge Design	360-705-7396
James Elvin	Olympic Region	360-570-6603
Jeff Petterson	Olympic Region	360-570-6621

The meeting began at 9:00 AM; the February meeting minutes were reviewed and approved.

Grand Mound to Maytown Widening

The Olympic Region made a presentation on a future construction job that will widen I-5 south of Olympia to 6 lanes. This job will have 8 bridges on the project beginning at the Grand Mound Interchange and ending at the Maytown Interchange. The new bridges will most likely have to be constructed in stages and the designers saw three options to build the bridges:

1. Start building the first stage of the new structures in the median. During stage 2 demolish the existing southbound bridge and reconstruct it. Stage 3 will shift traffic to the stages 1 & 2 bridge and complete the remainder of the structure.

2. Build a temporary detour structure to the side of the new bridge, and then shift traffic to the temp. bridge and one of the existing bridges. Demolish one of the

existing bridges build the new bridge and move all traffic to the new bridge and build the second structure.

3. Build a new bridge to the side of the existing structure on temporary falsework, move traffic to this bridge. Demolish the existing bridge and build the new substructure, then roll the new superstructure to its final position similar to the concept used on I-405 in Bellevue on the 8th Ave. Interchange. Put all traffic on this bridge, demolish the existing bridge and build a new bridge.

Highlights of team members' comments:

- Option one allows for construction in the median with restricted construction access. This option may need frequent nighttime closures of one travel lane for construction equipment. It consists of three stages of construction with longer construction time.
- Option 2 is attractive in term of the least construction time needed and convenient construction access. The design team mentioned additional cost needed to realign the interchange ramps and approaches.
- Option 3 is provides for good construction access but requires temporary supports and structure translation.

Lead Team Report

Mo and Charlie discussed the lead team meeting highlights. Mo handed out the Oregon DOT fuel escalation specifications and asked the members to provide input regarding a need for WSDOT to provide a fuel escalation clause in contracts. Some of the members thought an escalation clause in the contract is a good idea and that WSDOT will notice the reduction in the Contractors' risk in the bid prices. One member didn't think this was a burning issue at this time and suggested allowing the market to take care of the fluctuations. A few members thought that this was an issue on large multi-year contracts. If the State wrote a specification on this issue, everyone wanted a spec. that was easy to calculate; possibly something similar to what the Oregon DOT was currently using. Tobin mentioned that the Idaho allows adjustments on annual basis only.

Action Plan: No further action is needed at this time.

New Vibration Limits Specification

Jim Schettler was at the east coast and couldn't get this task accomplished for this meeting.

Action Item: This topic will be moved to next month agenda.

Results of Parametric Study, Straight vs. Sloped Back Face For Tall Retaining Walls Type 1

This item didn't get completed and will be put on next month's agenda.

Action Item: Kevin Parrish and Chris Deane will price the cost of building a retaining wall at the heights shown in Jugesh's handout with both a battered face and a vertical face so the cost difference can be evaluated for the next meeting.

Pile Driving Tolerances-Std. Specs. 6-05.3(11) A

The following specification was discussed and the consensus reached was that the following changes be made:

6-05.3(11) A Tolerances-

For elevated pier caps, the vertical centerline of each pile at cut-off elevation shall be within 2 inches in any direction of the locations indicated in the Contract.

For piles installed below footings, the vertical centerline of each pile at cut-off elevation shall be within 6 inches of the horizontal locations indicated in the Contract, unless specified otherwise. No pile edge shall be nearer than 4 inches from the edge of any concrete footing. Piles shall be installed such that the axial alignment of the top 10 feet of the pile is within ½ inch in one foot of the specified alignment (see Fig.1). No misaligned steel or concrete piles shall be pulled laterally. A properly aligned section shall not be spiced onto a misaligned section for any type of pile. Unless the Contract shows otherwise, all piles shall be driven vertically.

Action Item: Members to review and provide input for next meeting, before incorporation into the Std. Spec's

Special Provisions "Removing Portions of Exist. Br."

Mo handed out a revised version of the general special provision entitled "Removing Portions of Existing Concrete".

There was some concern whether someone delineating the removal area with a concrete saw and cutting ¾ inch deep could cut/nick every reinforcing bar. Most people thought the person running the saw would know if he was cutting into the reinforcing steel and it shouldn't be a problem.

There was also a discussion about what the term, "Steel reinforcing bars which extend from the existing members shall be cleaned (defined as sufficient mortar removal to expose the deformed surface of the bar)". The discussion was as how clean this was, if you could still have concrete attached to the bar as long as you could see the deformations. One suggestion was to say, "Expose rebar deformed profile" in lieu of clean. There are still method specs such as "vigorous brushing, pressure water jet spray" present in the Spec.

Action Plan: Mo will update the Specs. further and present at the next meeting.

Deep Pre-stressed Girder Cost

Jugesh mentioned that the recent bids on the deep prestressed girders have been considerably more that the Engineer's estimate. The Bridge Design Office will consider alternate steel girders for longer spans in future projects. John said that the truck availability is a concern particularly in late summer months. In addition to the delivery problems, crane costs sitting idle waiting for the girders to arrive contribute to high costs.

Action Plan: Foe discussion only. No action is needed.

Bridge Deck Curing

There was a general discussion about proper curing of concrete bridge decks and whether there was a need to revise the std. Specifications to try and eliminate this problem. One option was to fog the deck with water, Nevada used this specification, the fogging would begin immediately after finishing. Using an astro turf drag instead of tinning was also discussed. Moh asked whether an item for curing should be set up in the contract, most contractors didn't think this was necessary.

There was a discussion about temperature differential for concrete deck placement; there was a study that a temperature differential of more than 22 degrees between the deck surface temperature and the girders leads to cracking. This could be hard to maintain except maybe at night, especially on large structures. These structures will have to be tented and heated or cooled to keep the differential girder/deck temperature below the 22 degrees.

One idea was to retard the deck concrete and increase the maximum fly ash content of the mix to 35% max.
Someone asked if increasing the deck thickness or increasing the amount of reinforcing could aid in eliminating cracking.

One other idea was to implement a performance specification on deck concrete, where we would pay an incentive for non-cracked bridge decks and penalize for bridge decks that cracked.

Action Item: To be discussed further at the next meeting.

Bridge Deck Finishing Methods

Mo presented a brief PowerPoint presentation on finishing concrete decks. There was a discussion on whether the standard specifications should be modified so that a deck finishing machine was required for any deck placement down to 10 feet in width, under

10 feet the deck could be hand finished. Most of the contractors thought the current specification was ok, if it was enforced properly.

Action Item: To be further discussed at the next meeting.

There was no time to discuss the agenda item, “Requirement for Weighing Trussed Before Demo” and will be on next month’s agenda.

The meeting adjourned at noon.

Next meeting June 20th, at Corson Conference Room.